

N.W.T.: Charlton Island, about 52° 00' N, 79° 30' W, low alluvial flats subject to flood, *A. E. Porsild 4504*, July 6–14, 1929. ONTARIO: Chikanogahish, 53° 26' N, 82° 10' W, west shore of James Bay, fairly common on bare flats, *R. H. Smith 63*, July 11, 1944. *S. europaea* can now be recorded as new to the floras of the three administrative divisions that come together in the area: Ontario; Keewatin District, N.W.T.; and Ungava District, Quebec.

S. europaea is probably much more common in the James Bay region than these three collections would indicate. The plant quite likely occurs in suitable habitats around most of the shores of the Bay, but the muddy tidal flats of the Bay make these habitats not easily accessible to the collector.

Salicornia europaea is apparently not known from the shoreline of Hudson Bay to the north, nor is it known from the Labrador coast. Its disjunct distribution, St. Lawrence Basin—James Bay, is similar to that of a number of halophytic species that have been discussed by Potter² La Rocque³ and Boivin⁴ and hence will have to be viewed in the light of the hypotheses presented by these authors.—W. J. CODY.

A FERN FLORA OF MARYLAND, DELAWARE, AND THE DISTRICT OF COLUMBIA.⁵—This latest of state fern floras ranks among the most complete that have yet appeared. It is based on the examination of material in the author's own extensive herbarium and in the U. S. National Herbarium, Gray Herbarium, the herbarium of the Philadelphia Academy, and a number of other institutions. The introductory matter includes a list of herbaria examined, a map showing counties, a good historical sketch of botanical activities and publications in the area with mention of the number of ferns concerned, a table giving statistics of the ferns and fern allies in different publications on the region and on neighboring states (in which the failure to discriminate be-

² POTTER, D., Botanical evidence for a post-Pleistocene marine connection between Hudson Bay and the St. Lawrence Basin, *RHODORA* 34: 68–89, 101–112. 1932.

³ LA ROCQUE, A., Post-Pleistocene connection between James Bay and the Gulf of Saint Lawrence, *Bull. Geol. Soc. Amer.* 60: 363–379. 1949.

⁴ BOIVIN, B., The distribution of *Arnica wilsonii* Rydberg and its significance, *Rhodora* 54: 200–205. 1952.

⁵ Reed, Clyde F. The ferns and fern-allies of Maryland and Delaware including District of Columbia. xvii, 286 p. incl. 72 full-page fig. (271 separate fig.), 58 i. e. 59 small maps, front. 23 cm. Reed Herbarium, Baltimore, 1953. (\$3.00)

tween species and infraspecific categories makes the figures more misleading than helpful), a discussion of local distribution as influenced by soils and ecology, and an account of the life history of ferns and of their morphology with special attention to venation and spores. The remainder of the book, aside from an alphabetical list of the taxa with their principal synonyms, a glossary, a bibliography, and indices, is occupied by a keyed descriptive treatment of the ferns and fern allies of the region—67 native species (48 ferns, 19 fern allies), 63 varieties and forms, and 8 hybrids, according to my count, which does not entirely agree with the author's; there are also 4 escaped or introduced and slightly or not at all established species and one additional variety, as well as 3 *Asplenium* hybrids known only from adjoining states but apparently included by the author in his enumeration. The statement on p. 14 that the number of species in the District of Columbia is 16 or "perhaps nearer 20" is shown to be incorrect by the maps, which indicate definite records inside the District for 36 species; and there are 7 other cases in which the mark indicating occurrence is so placed that its pertinence is not clear but for which there is supporting material from the District in the U. S. National Herbarium, so that the number of species of ferns and fern allies known from the District is at least 43.

Under each species is given a general description, including statement of habitat, followed by a more detailed description in technical terms and smaller type, then the general and local range. The local distribution by counties of nearly all the species and very many of the varieties and forms, except a few with very restricted range, is shown on outline maps, of which there are 58; in several cases the distribution of more than one variety, or even that of several species, is shown by distinctive symbols on the same map. There are frequent notes on cultivation and sometimes on uses, as on bracken, ostrich fern (said to be "becoming more and more extinct" in the region), and on one of the scouring rushes, under which is the suggestion (borrowed from a writer on biochemistry) that the extinction of the dinosaurs might have been partly due to constipation brought on by the change in diet necessitated by the replacement of the dominant ferns with their purgative oils by the dyscathartic flowering plants.

The utility of the book for identification purposes depends on its keys and descriptions, but neither of these items can be regarded as entirely satisfactory. The keys are sometimes based on distinctions that are vague or hard to observe, while more definite ones that might have been used are omitted, and there is frequently a failure to present both sides of a really contrasting character. The key to the species of *Equisetum*, for instance, is based chiefly on characters of the sheath teeth and the central cavity, not all of which are correctly stated, and there is no mention of such distinctive features as the evergreen stem and apiculate spike of *E. hyemale*, the very dissimilar fruiting and sterile stems of *E. arvense*, or the loose reddish brown sheaths of *E. sylvaticum*.

The offset-printing process by which the book is produced has done full justice to the text but not to the photographs, although the outline maps came out well enough. The 73 full-page illustrations, mostly photographs of herbarium specimens and spores with a few habitat groups, all labeled plates but actually figures since they bear text on the back, are for the most part not completely satisfactory, being either too much reduced or too weakly reproduced to represent their subjects properly; in some cases, for instance fig. 12, 117, and 254, the specimens are poorly pressed or distorted. The few pictures of outdoor groups almost all lack definition, fig. 183 being an exception; the plate in which it appears (pl. 52) is in fact about the only really satisfactorily reproduced one in the whole work, but one could wish that better fronds had been chosen for illustration. The most unique feature of the book is its photomicrographs of spores, which are given for nearly every species; in general they appear to be fairly well reproduced, their usual lack of distinctive features, at least to the non-practiced eye, being probably inherent.

The book contains much good material, but it needs reworking and better reproduction to fulfill its promise.—S. F. BLAKE, PLANT INDUSTRY STATION, BELTSVILLE, MD.

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